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U.S. ENVIRONMENTAL PROTECTION AGENCY FINAL POLLUTION REPORT

I. HEADING

Date: September 19, 2000

Subject: Riverdale Chemical, 220 East 17th Street, Chicago Heights, Cook County, Illinois

From: Callie Bolattino, On-Scene Coordinator *Callie Bolattino*

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RE: POLREP #1 - Initial (August 21, 2000 thru September 19, 2000)

II. BACKGROUND

Site No: 05K2
CERCLIS No: ILD059446153
Response Authority: CERCLA Enforcement
Status of Action Memorandum: PRP lead, no Action Memorandum
Demobilization Date: N/A
Delivery Order No: N/A - PRP lead
NPL Status: non-NPL
Start Date: August 21, 2000
Completion Date: N/A

III. SITE DESCRIPTION

- A. Incident Category:** Active agricultural chemical manufacturer
- B. Site Location:** 220 East 17th Street, Chicago Heights, Cook County, Illinois

Site Description:

- The Riverdale Chemical Company is an active facility used for the formulation and packaging of various agricultural and turf chemicals. Riverdale has been conducting an RI/FS under an AOC at the site since 1985.
- In April 1984, a site study was conducted by E&E's Field Investigation Team (FIT) as part of the National Dioxin Test Strategy Program. This study indicated the presence of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and pesticides in the surface soil at the site. In response to the FIT study, Riverdale completed an Interim Remedial Measure (IRM) to control exposure to contaminants. The IRM included placement of a geotextile fabric over an area of approximately 19,600 ft² along with a barrier layer of 8 to 10 inches of crushed limestone.
- Riverdale entered into another AOC in 1985 to conduct the RI/FS at the site.
- A fire occurred at the facility on July 2, 1992, when a lightning strike apparently triggered a fire at a warehouse. The warehouse contained various fungicide, herbicide, and insecticide products, including the active ingredients: 2,4-D, Dicamba, 2,4,-DP, MCPA, MCPP, and oxidizers. After the fire was extinguished, the site clean-up was conducted under IEPA and U.S. EPA oversight.
- In 1996, The Agency for Toxic Substances and Disease Registry (ATSDR) conducted a study of the surrounding residential areas at the request of U.S. EPA. After performing field sampling, ATSDR determined that the concentrations of base neutral/acid extractables and organochlorine chemicals detected in the surface soil from residential properties adjacent to the site do not pose a public health hazard. Based on the sampling results, ATSDR recommended no further activities.
- At the present time, U.S. EPA is in the process of finalizing an Engineering Evaluation/Cost Analysis (EE/CA) for the site.

Description of threat:

- Because the Riverdale facility is an active manufacturing operation with expansions and upgrades necessary to meet regulatory requirements and business needs, three major construction projects are targeted for completion by January 2001. The three construction projects include building a raw material storage warehouse, building a liquid storage facility, and upgrading the railroad unloading area. These construction projects necessitate the excavation and disposal of material that has been shown in the draft EE/CA to pose a potential increased cancer risk to general site and construction workers. As a result of this health risk, the work will be conducted in an expedited manner under an AOC with U.S. EPA.

Preliminary Assessment/Site Inspection Results:

- The 1984 site investigation conducted by E&E's FIT indicated the presence of pesticides, VOCs, PAHs, phenolic compounds, and TCDD. A total of 15 samples were collected

from the Riverdale site. TCDD was detected at a maximum concentration of 394 ppb.

- Data from the surface soil portion of the RI detected widespread pesticide and dioxin contamination. The maximum concentrations of pesticides detected in the surface soil ranged from 130 ppb for gamma-benzene hexachloride (BHC; lindane) to 1 million ppb for chlordane. The average detected concentration for dioxin in the surface soil was 17.5 ppb, with a maximum detected concentration of 197 ppb.
- The subsurface soil investigative phase of the RI focused on the southern portion of the site. Pesticide contamination was found to be widespread in samples collected from the interval of 0 to 3 feet below ground surface (BGS). The maximum detected concentrations of pesticides ranged from 160 ppb for heptachlor epoxide to 200,000 ppb for dieldrin. Dioxin contamination in the subsurface soil was limited. However, dioxin was detected at 0.8 ppb in a single sample collected from the 6.5 to 8-foot BGS interval.
- A streamlined human health risk evaluation was performed as part of the draft EE/CA. Potential exposure of general site workers and construction/utility workers to contaminants in site soils through dermal contact with, and incidental ingestion of soil resulting from hand-to-mouth contact was evaluated. The estimated cancer risks for general site workers and construction/utility workers were 2.2×10^{-2} and 4.6×10^{-4} respectively; the estimated noncancer hazard indices (HIs) were 39.6 and 51.4, respectively.

IV. RESPONSE INFORMATION

A. Situation:

Current Situation:

- The temperatures during this removal action averaged in the high 70s° F.

Removal Activities to Date (August 21 - September 19, 2000):

- Excavation of contaminated soil within the railroad spill containment and storage area has been completed. Excavation was performed to the underlying clay layer at a depth of 8 feet in the containment trench and 7 feet in the storage area. Confirmatory samples were collected to ensure that clean-up goals had been met. A sand layer, 6-mil poly liner and fence marking were placed at the base of the excavation areas. Concrete was poured over the sand, poly and marking layers. All excavated soil was stockpiled, sampled and shipped as special waste for disposal at the Laraway Landfill in Laraway, Illinois.
- A 30 foot by 30 foot "hot spot" was delineated and excavated from the raw material storage warehouse area. All soil within the delineated area was excavated to the clay layer (approximately 5 feet) and stockpiled for disposal. Confirmatory samples have been collected from three sides and the base of the excavation basin. When clean-up goals have been met, the basin will be filled with limestone. Construction of the warehouse is in progress.

- In total, approximately 3,000 tons of soil was excavated and properly disposed as special waste at the Laraway Landfill. The soil was considered special waste because of the suspected presence of kerosene which is widely used at the site as a carrier in the processing of herbicides.
- Six samples were collected within the low lying "wetland" area of the property. The samples will be analyzed for pesticides, metals, VOCs, SVOCs and dioxin (on two samples). The results obtained from these samples will be used to complete the EE/CA and select a final remedy for the remainder of the site.

Enforcement:

- The PRP (Riverdale Chemical, now owned by Nufarm) is performing this removal action under an Administrative Order on consent.

B. Planned Removal Actions:

- Six samples will be collected from the utility corridor. Samples will be analyzed for pesticides. The results obtained from these samples will be used to complete the EE/CA and select a final remedy for the remainder of the site.
- A 10 foot by 10 foot "hot spot" was delineated on the east side of the liquid storage area and will be excavated upon completion of construction of the western side tanks. All soil within the delineated area will be excavated to the clay layer (approximately 4 feet) and stockpiled for disposal. Confirmatory samples will be collected. At the present time concrete has been poured on the western portion of the liquid storage area and tank assembly is in progress.

C. Next Steps:

- Obtain low lying "wetland" and utility corridor data and implement into EE/CA.
- Phase I Removal Action Report will be submitted to U.S. EPA by December 2000.
- Complete excavation on eastern portion of tank farm.

D. Key Issues:

- The remedial program will continue working with Riverdale to complete the EE/CA and implement the final remedy for the remainder of the site.

V. COSTS

	Ceiling	Amount Expended	Amount Remaining
START	\$7,500	\$4,100	\$3,400

The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor. Other financial data, which the OSC must rely upon, may not be entirely up to date. The cost accounting provided in this report does not necessarily represent

an exact monetary figure which the government may include in any claim for cost recovery.

VI. DISPOSITION OF WASTES

- The following is a summary of waste disposed to date:

Waste Disposal Table Riverdale Chemical Site Removal Action Chicago Heights, IL					
Waste Category	Quantity (tons)	Dates Shipped	Manifest #	Disposal Method	Facility Location
Special Waste, soil	1,500	September 14 - 19, 2000	To be provided	Landfill	Laraway Landfill (Waste Management), Laraway, IL